

# Notice of Allowability

Application No.

10/670,537

Examiner

James M McAleenan

Applicant(s)

LEHMAN, DALE T.

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_\_.
2. ☒ The allowed claim(s) is/are 1-22.
3. ☒ The drawings filed on 25 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 9/25/03, 9/25/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

The instant invention is deemed to be directed to an unobvious improvement over Thut (U.S. Patent Number 6,019,576) (see Figure 2-5). Thut discloses an impeller (22) (see Col. 5, line 19) for pumping molten metal (see Col. 3, line 31) including a shaft assembly (20) (see Col. 4, line 20) having an axis, wherein a central hub (58) (see Figure 3 and Col. 5, line 22) is fixed to the shaft (20). Thut teaches a radial base (60) (see Figure 3 and Col. 5, line 19) extending from the hub transversely away from the shaft (20), wherein the vanes (68) (see Figure 3 and Col. 5, line 31) project in an axial direction from the base (60). Thut discloses the vanes (68) projecting from the base (60) at angularly spaced locations about the shaft (20) on a first side of the base (60). Thut teaches an opening in the base (60) remote of the axis communicating with a second side of the base (60) opposed from the first side. Thut discloses an impeller (22) for pumping molten metal including a body (64) (see Figures 3-4 and Col. 5, line 24) having a longitudinal axis, and an end surface transversely intersecting the axis. Thut teaches a peripheral surface extending about the axis, and a plurality of elongate pumping chambers extending in the body (64) at angularly spaced location about the longitudinal axis. Thut discloses each of the pumping chambers having a length extending along the peripheral surface and a width extending transverse to the length (see Figures 3-4). Thut discloses the pumping chamber having an inlet opening formed in the end surface and an outlet opening formed in the peripheral surface. The improvement comprises in combination of: 1) the pumping chamber including opposed planar walls of substantially equal length extending to the outlet opening; and 2) the pumping chamber length and width being in a ratio of less than 3:1.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee, and to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "comments on Statement of Reasons for allowance."

### **PRIOR ART**

No prior art is cited by examiner.

### **CONTACT INFORMATION**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner James M. McAleenan whose telephone number is (703) 308-2827. The examiner can normally be reached on Monday thru Friday from 9:00 am to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached at (703) 308-1044. The fax number for this Group is (703) 872-9306.

An inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

James M. McAleenan  
Patent Examiner  
Art Unit 3745

 8/31/04

  
**EDWARD K. LOOK**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3700**  
9/7/04